UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,117	04/19/2004	Christopher J. Pettey	NEXTIO.0402	1473

23669 7590 05/08/2006

HUFFMAN LAW GROUP, P.C.
1832 N. CASCADE AVE.
COLORADO SPRINGS, CO 80907-7449

EXAMINER	
RAY, GOPAL C	

ART UNIT	PAPER NUMBER
2111	

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/827,117	PETTEY ET AL.	
	Examiner	Art Unit	
	Gopal C. Ray	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,12,14 and 17* is/are rejected.

7)☒ Claim(s) *2,5-11,13,15,16 and 18-21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 9/8/04, 10/21/04, 5/23/05, 8/24/05(2), 9/3/05, 9/18/05, 12/21/05, 12/23/05, 4/4/06 and 4/12/06
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Applicant's election of Invention I, claims 1-21 in the reply filed on 4/1/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 1-21 are presented for examination.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner believes that the title of the invention is broad. A descriptive title indicative of the invention will help in proper indexing, classifying, searching, etc. See MPEP 606.01. However, the title of the invention should be limited to 500 characters.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it exceeds 150 words limit. The office requires now that the abstract of the disclosure to be within 150 words. Applicant should reduce the size of the abstract to 150 words.

4. The drawings filed on 4/19/04 are acceptable by the examiner for examination purposes. However, the Office of Initial Patent Examination (OIPE) reviews drawings initially for publication purposes. Direct any inquiries concerning drawing review for

publication purposes to the Office of Initial Patent Examination (OIPE). See MPEP 507 for detail information.

5. Applicant should insert Serial Numbers of US Patent Applications and/or update status inserting Patent No., if patented of the related applications disclosed on pages 1-2 of the specification of the invention. Furthermore, the lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Moreover, all claims should be revised carefully to eliminate all grammatical errors and antecedent basis problems.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,823,458 granted to Lee et al.

As per claim 1, the reference of Lee et al. teaches, "a first plurality of I/O ports and a second I/O port" in Fig. 2, ports connecting elements 280, 295 and 295 from elements 210, 220 and 230; "core logic, coupled to said first plurality of I/O ports and said second I/O port, configured to route said transactions between said first plurality of I/O ports and said second I/O port" in Fig. 2, elements 240, 250, 260, 270 and Fig. 5.

As per claim 3, the reference of Lee et al. teaches the added limitation in col. 1, lines 9-14.

As per claim 12, the claim recites specifically the "core logic" similar to the limitation of claim 1. However, the reference of Lee et al. teaches the features in Fig. 2, elements 240, 250, 260, 270; Fig. 5 and col.6, lines 3-14.

8. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 4, 14 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6,823,458 granted to Lee et al. in view of United States Patent Application Publication US 2004/0073716.

As per claim 4, the claim is rejected for the same reasons as discussed in the rejection of claim 1 with the exception of "wherein said protocol comprises PCI Express". However, the above feature was well known to one of ordinary skill in the art at the time the invention was made as evidenced by US 2004/0073716. US 2004/0073716 teaches the feature in paragraph [0041]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement PCI Express Architecture as taught by the above publication because PCI Express is a well known and widely used standard in the art which provides low cost, high performance, general purpose I/O interconnect defined for a wide variety of computing and communications platforms.

As per claim 14, the added limitation of the claim is rejected for the same reasons as discussed in the rejection of claim 4 above.

As per claim 17, the claim is rejected for the same reasons as discussed in the rejection of claim 12 with the exception of "wherein said core logic associates each of said operating system domains with each of a corresponding root complex". However, the above feature was well known to one of ordinary skill in the art at the time the invention was made as evidenced by US 2004/0073716. US 2004/0073716 teaches the feature in Fig. 4, element 318 and paragraph [0041]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the above feature in the system of Lee et al. as taught by the above publication to obtain the claimed invention because it is a well known and widely used in a computing system environment which provides a logical entity of an enhanced general input/output hierarchy that is closest to a host controller, a memory controller hub, an I/O controller hub, or some combination of chipset/CPU elements.

10. Dependent claims 2, 5-11, 13, 15, 16 and 18-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an Examiner's Statement of Reasons for Allowance:

The claimed invention is directed to "a switching apparatus for providing shared I/O within a load-store fabric". The examiner has done complete search and found no prior art of record, alone or in combination, teaches or fairly suggests additional

limitation(s) of each dependent claim such as "wherein said variant comprises encapsulating an OS domain header within a transaction layer packet that otherwise comports with said protocol" in combination with the remaining claimed elements in claim 2. Similarly, limitations added to other dependent claims 5-11, 13, 15, 16 and 18-21 are patentably distinguishable. Therefore, the invention as claimed in dependent claims 2, 5-11, 13, 15, 16 and 18-21 is considered allowable because combinations recited in the claims are patentably distinguished from the prior at of record.

Any comments considered necessary by applicant must be submitted in response to this office action to avoid processing delays. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is urged to consider the references. However, the references should be evaluated by what they suggest to one versed in the art, rather than by their specific disclosure.

The prior art references submitted by applicant have been considered by the examiner and made of record in the file. If applicants are aware of any prior art better than those are of record, they are required to bring the prior art to the attention of the examiner. Applicants are also reminded that each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in 37 CFR 1.56. Applicants are

advised to submit any information material to patentability in accordance with 37 CFR 1.97 and 1.98.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gopal C. Ray whose telephone number is (571) 272-3631. The examiner can normally be reached on Monday - Friday from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart, can be reached on (571) 272-3632. The fax phone number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**mark.rinehart@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC central telephone number is (571) 272-2100. Moreover, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lastly, paper copies of cited U.S. Patents and Patent Application Publications ceased to be mailed to applicants with office actions as of June 2004. Paper copies of Foreign Patents and Non-Patent Literature will continue to be included with office actions. These cited U.S. Patents and Patent Application Publications are available for download via Office's PAIR. As an alternate source, all U.S. Patents and Patent Application Publications are available on the USPTO web site (www.uspto.gov), from the office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at http://www.uspto.gov/ebc/index.html or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. Patent or Patent Application Publications will not be granted.

Gopal C. Ray

GOPAL C. RAY
PRIMARY EXAMINER
GROUP 2800